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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
Marketing Research Division

MARKETING RESEARCH PERTAINING TO OILSEEDS
AND FATS AND OILS

Some marketing research studies under way are briefed in the following paragraphs to indicate the type of problems being studied in this field. More detailed information may be secured on any of these studies by contacting directly the agency concerned.

The measurement of marketing margins, step by step, on cottonseed and soybean oils in shortening and margarine was started shortly after July 1, 1955. The immediate object is to trace several specific examples through the marketing steps, with historical and geographical comparisons of product composition, marketing channels, and margins.

The study of methods and practices of soybean oil mills in relation to costs and margins has been based principally on industry data made available through the Soybean Processors Association. Lowest costs were found at large, modern mills fully utilizing their physical capacities and milling-in-transit privileges. Small mills had certain advantages in their local meal markets and gave farmers in some fringe areas a local market for beans. Larger mills sold much of their meal in mixed feed and some found special advantage in producing "high grade" protein meal at a premium. (See detailed report.)

Relative advantages of soybean oil mills of different types and sizes were studied through statistical comparisons of engineers' estimates of the components of different types and sizes of mills and their standardized performance. Gross returns per bushel of beans processed by many small mills, favorably situated, exceeded returns to large mills, due to advantages in their local markets, but processing costs for small mills were correspondingly high. No shift in size of mills would be of much benefit to soybean producers. Smaller mills could be expected to bring decreased bean prices; larger mills would bring principally lower processing costs offset by higher transportation costs. Similar analyses of cottonseed processing were carried out in previous years. Those studies showed benefits to farmers from large mills and from full utilization of capacity, but relatively little such benefit directly to farmers from the adoption of more modern types of mills.

Variations in utilization of power and labor in cottonseed oil mills are now being studied through a mill survey, and the possibilities of increased efficiency and better returns to small mills by converting to more modern types are being developed by a detailed analysis of the plant and operations of five small-mill situations.

Storage research is in process relative to cottonseed and linseed oils. Cottonseed oil, principally refined oil, of varying origins and characteristics from the 1954 crop has been put in experimental drum storage, and will be sampled and tested monthly over a period of at least 2 years in order to relate these factors to storage behavior of the oils. A check of drum storage behavior with tank storage is planned, but has not so far been practical. CCC records on cottonseed and linseed oils storage from 1948 to date are being analyzed for parallel information. Analysis of tank storage of fats and oils and of storage of oilseeds and their products at vegetable oil mills has been completed. A report is currently being edited for publication. Storage facilities are

ample, with minor exceptions. Processors often find it desirable to maintain significantly more storage for oilseed products than physical mill efficiency requires. The purpose apparently is to give them flexibility in timing their marketing operations. Study of flaxseed storage is in a preliminary stage. Considerable library work and planning have been done. CCC castorbeans are now in experimental storage and being sampled periodically.

The feasibility of improving grading and pricing methods for castorbeans is currently being examined, coupled with investigation of the behavior of castorbeans in storage. Oil content of castorbeans is found to differ appreciably between varieties, and very considerably within varieties. If the beans could be sampled and tested and then priced according to oil content, farmers would have an incentive to grow high-oil content beans. Research has shown that the current discount for cracked and broken beans can now be greatly reduced or omitted. Such beans showed 9 percent more oil content than whole sound beans, and the oil met stockpile specifications even after 2 years' storage of the beans.

A study is being conducted on methods of sampling, testing, grading, and valuing soybeans as sold by farmers, with emphasis on results of new methods of physical analysis. It also looks toward possible improvement in grade standards. It will add to the value of work done a few years ago on characteristics of soybeans or other relevant factors in respect to their use as indexes of soybean value.

Tung nuts likewise are being analyzed to learn more of the factors that bear on grading and pricing, through helping determine, or varying with, their oil content.

As tentatively reported, the data obtained in an animal fats study indicate that lard quality varies greatly, even within individual plants, in (1) chemical analysis, (2) organoleptic characteristics, and (3) shelf life. Lard of low fatty acid, high smoke point, and high stability (long shelf life) can be, and is being, produced by all three methods (open kettle, steam, and dry rendering) in medium and small plants. Lard produced by the open kettle method shows the greatest variation in quality and that produced by the dry rendering method shows the least variation. The largest single cost item is for packaging materials and the second largest is for labor. Average total costs vary regardless of size of plant.

An exploratory study of the economics of the tallow and grease industry has been initiated to study the relative efficiency of different practices in the marketing and processing of renderers' raw materials and the differential effects of such practices on raw material supplies, total supplies, and prices.

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